AGENDA IRVINE RANCH WATER DISTRICT SUPPLY RELIABILITY PROGRAMS COMMITTEE THURSDAY, JANUARY 16, 2025

This meeting will be held in-person at the District's headquarters located at 15600 Sand Canyon Avenue, Irvine, California. The meeting will be held on the second floor in the Committee room, please check in with the receptionist for access. The meeting will also be broadcasted via Webex for those wanting to observe the meeting virtually.

To observe this meeting virtually, please join online using the link and information below:

Via Web: https://irwd.webex.com/irwd/j.php?MTID=mfc06209bfc9e628091562954fadab033

Meeting Number (Access Code): 2484 615 8929

Meeting Password: z9MJAiREc78

As courtesy to the other participants, please mute your device when you are not speaking.

PLEASE NOTE: Participants joining the meeting will be placed into the Webex lobby when (if) the Committee enters Closed Session. Participants who remain in the "lobby" will automatically be returned to the open session of the Committee once the closed session has concluded. Participants who join the meeting while the Committee is in closed session will receive a notice that the meeting has been locked. They will be able to join the meeting once the Closed Session has concluded.

CALL TO ORDER	1:30 p.m.			
<u>ATTENDANCE</u>	Committee Chair: Committee Member:	Doug Reinhart Peer Swan		
ALSO PRESENT	Paul Cook Neveen Adly Natalie Palacio Marina Lindsay		Paul Weghorst Fiona Sanchez Robert Huang	

PUBLIC COMMENT NOTICE

If you wish to address the Committee on any item, please submit a request to speak via the "chat" feature available when joining the meeting virtually. Remarks are limited to three minutes per speaker on each subject. Public comments are limited to three minutes per speaker on each subject. You may also submit a public comment in advance of the meeting by emailing comments@irwd.com before 8:00 a.m. on January 16, 2025.

COMMUNICATIONS

- 1. Notes: Weghorst
- 2. Public Comments
- 3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
- 4. Determine which items may be approved without discussion.

INFORMATION

5. <u>WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS,</u> AND PROGRAMS – LINDSAY / PALACIO / SANCHEZ / WEGHORST

Recommendation: Receive and file.

OTHER BUSINESS

- 6. Receive Oral Updates from District's liaison to Dudley Ridge Water District and provide information on relevant activities.
- 7. Directors' Comments
- 8. CLOSED SESSION
 - A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS –

Pursuant to Government Code Section 54956.8:

Property: Rights to Water from Sites Reservoir Project Agency negotiator: Paul Cook, IRWD General Manager

Negotiating parties: Wheeler Ridge-Maricopa Water Storage District

Under negotiation: Price and Terms of Payment

- 9. OPEN SESSION
- 10. Adjourn

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available electronically via the Webex meeting noted. Upon request, the District will provide for written agenda materials in appropriate alternative formats, and reasonable disability-related modification or accommodation to enable individuals with disabilities to participate in and provide comments a public meetings. Please submit a request, including your name, phone number and/or email address, and a description of the modification, accommodation, or alternative format requested at least two days before the meeting. Requests should be emailed to comments@irwd.com. Requests made by mail must be received at least two days before the meeting. Requests will be granted whenever possible and resolved in favor of accessibility.

January 16, 2025

Prepared by: M. Lindsay / N. Palacio Submitted by: F. Sanchez / P. Weghorst

Approved by: Paul A. Cook

SUPPLY RELIABILITY PROGRAMS COMMITTEE

WATER BANKING PROJECT FACILITIES, CAPACITIES, OPERATIONS, AND PROGRAMS

SUMMARY:

Staff has prepared information related to IRWD's water banking facilities, capacities, operations, and exchange programs. The information is regularly updated to reflect changes in the status of IRWD's projects, programs, and operations. At the Committee meeting, staff will review this information and provide an overview of IRWD's forecasted monthly recharge operations for 2025. Staff will also provide an update on water supply conditions in California.

BACKGROUND:

Staff has prepared reference materials in tabular, map, and schematic formats to describe IRWD's water banking facilities, capacities, operations, storage, and exchange programs. These reference materials are updated regularly to reflect changes in the status of the projects, programs, and operations. The following is an overview of the reference materials as well as forecasted recharge operations for calendar year 2025 at the IRWD Water Bank.

Capacity and Operations Tables:

A table presenting storage, recharge, and recovery capacities of existing and planned IRWD water banking projects, including capacities available to IRWD in the Kern Water Bank, is provided as Exhibit "A". Exhibits "B" and "C" provide an update on water banking recovery and recharge operations as well as the balance of the water stored in the Kern Water Bank. Exhibit "B" provides before-loss estimates of water recharged and stored at the water banking projects. Exhibit "C" shows after-loss estimates of water recharged and stored at the projects.

Summary of Programs:

A table summarizing IRWD's water purchase and exchange programs is presented as Exhibit "D". This table lists each water purchase and exchange program IRWD has entered into and presents information related to the type of exchange, year executed, agreement type, and water type. IRWD and partner shares are listed, and the table shows the accumulated total amount of water secured by each program. The balances listed for IRWD and its partners show the amount of water remaining in storage with IRWD's balances specifying whether the water is stored in Metropolitan Water District's system, Kern County, or owed to IRWD by Dudley Ridge.

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Exhibit "E" graphically depicts how storage of SWP and non-SWP water has changed annually in the Strand and Stockdale Integrated Banking Projects. Exhibit "E" also depicts the balance of water owed to IRWD by Dudley Ridge (shown as credits). The tables provided as Exhibit "F" shows how capacities in the water banking projects have been dedicated to IRWD's existing and proposed exchange programs.

Project Maps:

To support the tables and figures provided as Exhibits "A", "B", "C", "D", "E", and "F", staff has prepared maps depicting project wells, pipelines, recharge basins, and Cross Valley Canal turnout locations, along with the most current recharge rates. These maps are provided as Exhibits "G", "H", and "I", respectively. Exhibit "I" includes the most recent recharge rates at the IRWD Water Bank. The facilities shown on the maps are associated with the Strand Ranch, Stockdale West, Stockdale East, and Drought Relief Projects.

Program Agreement Diagrams:

Schematic diagrams have been prepared that depict IRWD water banking and exchange programs with Rosedale-Rio Bravo Water Storage District, Buena Vista Water Storage District, Dudley Ridge, Metropolitan, and AVEK. A new exhibit was added as Exhibit "Q" for the long-term exchange program with Santa Clara Valley Water District (Valley Water) that is currently being implemented. These diagrams are provided as Exhibits "J", "K", "L", "M", "N", "O", "P", and "O" as described in the List of Exhibits.

Cost of Water Tables:

A summary of the costs of water from each of IRWD's unbalanced exchange partnerships through the year 2023 is provided as Exhibit "R". Exhibit "R" has been updated to include an additional table. The first table (labeled as Table 6) summarizes the cost to secure the water and store it in the IRWD Water Bank. The second table (labeled as Table 7) summarizes the cost to recover the water from the IRWD Water Bank and deliver it to IRWD's service area. The tables list each of IRWD's unbalanced exchange partnerships and present information related to the period over which water was acquired, water type, IRWD's share of water, and various cost components as well as the total cost of water delivered to IRWD's service area. Cost components include fixed and variable operating costs, estimated future IRWD recovery costs, the 2025 Metropolitan Full Service Untreated Tier-1 Rate, and a capital cost of water. The variable costs include an administrative fee issued by the Kern County Water Agency for staff time related to processing Transaction Request Forms. The costs of water are presented on a dollar per acre-foot basis. Exhibit "R" will be updated periodically to reflect 2023 and 2024 operations once all invoices have been received from Rosedale.

IRWD's Coordinated Agreement with Metropolitan:

An overview of IRWD's Coordinated Operating, Water Storage, Exchange, and Delivery Agreement with Metropolitan and Municipal Water District of Orange County (Coordinated Supply Reliability Programs Committee: Water Banking Project Facilities, Capacities, Operations, and Programs
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Agreement) is provided as Exhibit "S". The benefits to IRWD are foundational to the success of IRWD's water banking project and programs.

Forecasted 2025 Water Recharge Activities:

Projected deliveries to IRWD's Water Bank in 2025 are depicted in Exhibit "T". IRWD's Table A allocation at the Jackson Ranch in Dudley Ridge is currently projected at 262 AF, based on a 15% State Water Project (SWP) allocation. At the end of December, Dudley Ridge notified staff that they would like to deliver 2,000 AF of water as part of their return obligation under the 1-for-1 long term exchange program. Deliveries are also expected from Homer and Valley Water. At the Committee meeting, staff will provide an update on the status of anticipated water deliveries to the IRWD Water Bank for 2025. Staff will update the forecasted and preliminary delivery amounts shown in Exhibit "T" as more information becomes available.

Water Supply Conditions Updates:

At the meeting, staff will update the Committee on water supply conditions in California and how these updates may affect recharge operations at IRWD's Water Bank in 2025.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Recharge, Storage and Recovery Capacities of Current and Anticipated Water Banking Projects

Exhibit "B" - Water Banking Storage, Recharge, and Recovery Operations before Losses

Exhibit "C" – Water Banking Storage, Recharge, and Recovery Operations after Losses

Exhibit "D" – Status of IRWD Purchase and Exchange Programs

Exhibit "E" – Historic Water Storage in Strand and Stockdale Projects

Exhibit "F" – Dedicated Capacities of Current Water Banking Projects

Exhibit "G" – Map of Water Banking Project Wells and Pipelines

Exhibit "H" - Map of Water Banking Recharge Basins and Turnout Facilities

Exhibit "I" – Map of Water Banking Recharge Rates

Exhibit "J" – Diagram of IRWD-Rosedale Water Banking and Exchange Program Agreements

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Exhibit "K" – Diagram of Long-term Water Exchange Program with Buena Vista Water Storage District and Diagram of One-year Program to Augment Recharge Using Stockdale West Recharge Facilities with Buena Vista Water Storage District

Exhibit "L" – Diagram of Unbalanced Exchange Program Diagram with Dudley Ridge

Exhibit "M" – Diagram of Coordinated Operating, Water Storage, Exchange, and Delivery Agreement with Metropolitan

Exhibit "N" – Diagram of Template Wheeling Agreement with Metropolitan

Exhibit "O" – Diagram of Dudley Ridge One-for-One Exchange

Exhibit "P" – Diagram of Long-term Water Exchange Program with Antelope Valley-East Kern

Exhibit "Q" - Diagram of Long-term Water Exchange Program with Valley Water

Exhibit "R" - Cost of Water Tables

Exhibit "S" – Summary of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and MWDOC (updated 8 Feb 2024)

Exhibit "T" – Actual and Forecasted 2025 Recharge Operations

Exhibit "A"

TABLE 1

Current and Anticipated Water Banking Project s Recharge, Storage and Recovery Capacities December 11, 2024

	_	RSHIP AND LL INFO		ALLOCA	ATED CAPACI	TY (AF)			Y RECOVERY ONS (CFS)		Y RECOVERY ONS (CFS)
WATER BANKING PROJECT	IRWD OWNED	WELLS EXISTING	TOTAL STORAGE CAPACITY	ANNUAL RECHARGE 1 ST PRIORITY	ANNUAL RECHARGE 2 ND PRIORITY	ANNUAL RECOVERY 1 ST PRIORITY	ANNUAL RECOVERY 2 ND PRIORITY	RECOVERY CAPACITY AS PLANNED ¹	RECOVERY CAPACITY (Average Daily Production 1/1/2021 - 7/31/2022)	RECOVERY CAPACITY AS PLANNED	RECOVERY CAPACITY CURRENT CONDITIONS
Strand Ranch	Yes	7	50,000	17,500	-	17,500	-	40.0	20.5	-	-
Stockdale West	Yes	3	26,000	27,100	-	11,250	-	15.0	11.6	-	-
Stockdale East	No	2	-	-	19,000	-	7,500	-	-	10.0	9.0
IRWD Acquired Storage Account ²	No	-	50,000	-	-	-	-	-	-	-	-
Drought Relief Project Wells ²	No	3	-	-	-	-	-	15.0	16.5	-	-
Kern Water Bank Storage Account ⁴	No	-	9,495	3,200	-	1,520	<5,000	-	-	-	-
TOTALS		15	135,495	47,800	19,000	30,270	12,500	70.0	48.6	10.0	9.0
Partner Capacities	3		38,000	22,300	9,500	10,850	0	35.5	25.0	-	-
IRWD Capacities (does not include Kern \	Water Bank c	apacities)	88,000	22,300	9,500	17,900	7,500	34.5	25.0	-	-
IRWD's r	ecovery d	uring 6 mon	th partner red	covery period	l (AF)			12,420	9,000	-	-
IRWD's	recovery c	fter 6 mont	h partner rec	overy period	(AF)			5,480	6,733	-	-
	TOTALS (AF) 17,900 15,733							15,733	-	-	
	Number of months needed to recover IRWD's total AF after partners' recovery (Assumes IRWD has use of total recovery capacity after partners' recovery) 8.6 10.2							-	-		
	Strand Ranch monthy recharge amount assuming 0.3 ft/day average recharge rate (AF) Stockdale West monthy recharge amount assuming 0.3 ft/day average recharge rate (AF)								518 331		

¹ Based on designed Strand recovery capacity assuming 370' bgs. Assumes 5 cfs for each of the Stockdale West and Drought Relief wells in order to meet IRWD's Water Banking, Transfers, and Wheeling policy position. Assumes partners' water is recovered over 6 months.

²IRWD has use of Acquired Storage and Drought Relief Project wells until January 12, 2039, unless the term of the agreement is extended.

³One half of storage capacity at Stockdale West and Strand Ranch will be allocated for partners.

⁴Kern Water Bank capacities based on 6.58% of Dudley Ridge Water District's 9.62% share of the Kern Water Bank. Annual recharge amount is based on an average of recharge rates for high and low groundwater level conditions. 5,000 AF of recovery capacity may be available for second priority use.

Exhibit "B"

TABLE 2
IRWD's Water Banking Storage, Recharge and Recovery Operations - BEFORE LOSSES
January 16, 2025

				WATER BAN	NKING ENTITY			
			BUENA VISTA	CENTRAL COAST	ANTELOPE VALLEY-		DUDLEY RIDGE WATER	TOTAL BY WATER TYPE
TRANSACTIONS	IR	WD	(BVWSD)	(CCWA)	EAST KERN (AVEK)	SILVERTIP	DISTRICT (DRWD) ³	AND STORAGE
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	LOCATION
	•			BEGINNING WATER	IN STORAGE 2024 (AF)		•	•
Total Kern Water Bank ⁴	-	4,322	-	-		-	-	4,322
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	15,006	20,598	11,181	225	3,536	-	872	51,418
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	7,525	-	-	-	-	-	-	7,525
TOTAL STORED WATER (1/1/2024)	34,564	24,920	11,181	225	3,536		915	75,341
				(RECOVERY) AND RE	CHARGE IN 2024 (AF)			
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-
2024 SWP Allocation (40%)	350	-	-	-	_	-	350	700
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	_
AVEK Long Term Exchange Est.	-	-	-	-	-	-	-	-
Silver Tip 2023 Short Term Exchange	-	-	-	-	-	-	-	-
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	2,200	-	-	-	-	-	-	2,200
TOTAL 2024 TRANSACTIONS 7	2,550	-	-	-	-		350	2,900
Total Kern Water Bank ⁴	-	4,322	-	-	-	-	-	4,322
Total MWD System	12,033	_	-	-	-	-	43	12,076
Total Kern County	17,556	20,598	11,181	225	3,536	-	1,222	
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	5,325	_	-	_	_	_	_	5,325
TOTAL STORED WATER (1/1/2025)	34,914	24,920	11,181	225	3,536		1,265	
,,,,,	•	,	,	(RECOVERY) AND RE	CHARGE IN 2025 (AF)		,	,
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	_	-	-	_	-
2025 SWP Allocation (15%)	-	-	-	-	-	-	-	-
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	-
AVEK Long Term Exchange Est.	-	-	-	-	-	-	-	_
Silver Tip 2023 Short Term Exchange	-	-	-	-	-	-	-	-
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	-	-	-	-	-	-	-	-
TOTAL ESTIMATED 2025 TRANSACTIONS 7	-	-	-	-	-	-	-	-
				ESTIMATED WATER	IN STORAGE 2025 (AF)			
Total Kern Water Bank⁴	-	4,322		-	-	-	-	4,322
Total MWD System	12,033	-	-	-	_	-	43	1
Total Kern County	17,556	20,598	11,181	225	3,536	-	1,222	
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	5,325	-	, -	-		_	_	5,325
TOTAL ESTIMATED STORED WATER TO DATE	34,914	24,920	11,181	225	3,536	-	1,265	

NOTES: MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 295 AF from CVWD that stays in Kern County.

 $^{^{2}}$ IRWD's Non-SWP total includes 2,403 AF, net of losses, of Kern County Water Agency Article 21 Water.

³ DRWD water supply will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. MWD took delivery of IRWD's 2022 SWP allocation in June 2022.

⁴ IRWD's KWB Account balance includes SWP, Friant and Kern River water. The KWB account balance is included in the Non-SWP column because it is not exportable to IRWD's service area.

⁵ Per the DRWD Long-Term 1-for-1 Exchange Program, Non-SWP water delivered to DRWD landowners will be returned to IRWD as SWP water at a later date. To account for the SWP water that will be returned at a later date, the amount of water owed will be shown as a credit. Total assumes all water is returned to IRWD Water Bank which adds in a 10% loss factor.

⁶ Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁷ Total banking losses for 2023 deliveries to the IRWD bank are estimated to be 3,506 AF. Total banking losses for 2024 deliveries to the IRWD Water Bank are estimated to be 414 AF.

TABLE 3
IRWD's Water Banking Storage, Recharge and Recovery Operations - AFTER LOSSES
January 16, 2025

				WATER BANK	ING ENTITY			
			BUENA VISTA	CENTRAL COAST	ANTELOPE VALLEY-EAST		DUDLEY RIDGE WATER	TOTAL BY WATER
TRANSACTIONS	IRV	WD	(BVWSD)	(CCWA)	KERN (AVEK)	SILVERTIP	DISTRICT (DRWD) ³	TYPE AND STORAGE
	SWP ¹	NON-SWP ²	NON-SWP	SWP	SWP	SWP	SWP	LOCATION
	•			BEGINNING WATER IN	STORAGE 2024 (AF)			•
Total Kern Water Bank ⁴	-	4,242		-	-	-	-	4,242
Total MWD System	12,033	-	=	-	-	=	43	12,076
Total Kern County	12,023	15,098	10,113	193	3,032	-	748	41,207
Total DRWD 1-for-1 Long Term Exchange Credit ⁵	7,306	-	-	-	-	-	-	7,306
TOTAL STORED WATER (1/1/2024)	31,362	19,340	10,113	193	3,032	-	791	64,831
				(RECOVERY) AND REC	HARGE IN 2024 (AF)			
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-		-	-	-	-	-
2024 SWP Allocation (40%)	300	-	-	-	-	-	300	600
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	-
AVEK Long Term Exchange Est.	-	-	-	-	-	-	-	-
Silver Tip 2023 Short Term Exchange	-	=	=	-	-	=	-	=
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	1,886	-	-	-	-	-	-	1,886
TOTAL 2023 TRANSACTIONS	2,186	-	-	-	-	-	300	2,486
Total Kern Water Bank	-	4,242	-	=	-	-	-	4,242
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	14,209	15,098	10,113	193	3,032	-	1,048	43,693
Total DRWD 1-for-1 Long Term Exchange Credit	5,420	-	-	-	-	-	-	5,420
TOTAL STORED WATER (1/1/2025)	31,662	19,340	10,113	193	3,032	-	1,091	65,431
				(RECOVERY) AND REC	HARGE IN 2025 (AF)			
KWB Recovery for use on Jackson Ranch ⁶ Est.	-	-	-	-	-	-	-	-
2025 SWP Allocation (15%)	-	-	-	-	-	-	-	-
BV Long Term Program Kern River Water Est.	-	-	-	-	-	-	-	-
AVEK Long Term Exchange Est.	-	=	=	-	-	=	-	=
Silver Tip 2023 Short Term Exchange	-	=	=	-	-	-	-	=
DRWD 1-for-1 Long Term Exchange (Recharge) Est.	-	=	-	-	-	=	-	=
TOTAL ESTIMATED 2025 TRANSACTIONS	-	-	-	-	-		-	-
				ESTIMATED WATER IN	STORAGE 2025 (AF)			
Total Kern Water Bank	-	4,242	-	-	-	-	-	4,242
Total MWD System	12,033	-	-	-	-	-	43	12,076
Total Kern County	14,209	15,098	10,113	193	3,032	-	1,048	43,693
Total DRWD 1-for-1 Long Term Exchange Credit	5,420	-	-	-	-	-		5,420
TOTAL ESTIMATED STORED WATER TO DATE	31,662	19,340	10,113	193	3,032	-	1,091	65,431

NOTES: Water in storage has been adjusted to account for losses. IRWD's water stored in Kern County is adjusted 15% for losses (5% for out of county loss, 6% surface loss, and 4% reserve loss); Water stored for BVWSD in Kern County is adjusted 10% (6% for surface loss and 4% for reserve loss); no losses for water directly delivered to MWD system.

MWD = Metropolitan Water District of Southern California.

¹ IRWD's SWP includes 251 AF from CVWD that stays in Kern County.

² IRWD's Non-SWP total includes 2,403 AF of Kern County Water Agency Article 21 Water.

³ DRWD water will be returned by MWD or IRWD's Strand Ranch to IRWD's Jackson Ranch. MWD took delivery of IRWD's 2022 SWP allocation in June 2022. MWD will not take delivery of IRWD's 2023 SWP Allocation.

⁴ IRWD's KWB Account balance includes SWP, Friant and Kern River water. The KWB account balance is included in the Non-SWP column because it is not exportable to IRWD's service area. The 2022 beginning KWB balance was revised by DRWD based on KCWA 2021 end of year balances.

⁵ Per the DRWD Long-Term 1-for-1 Exchange Program, Non-SWP water delivered to DRWD landowners will be returned to IRWD as SWP water at a later date. To account for the SWP water that will be returned at a later date, the amount of water owed will be shown as a credit. Total assumes all water is returned to IRWD Water Bank which adds in a 10% loss factor. Final amounts may be subject to additional CVC losses.

⁶Water recovered from IRWD's Kern Water Bank account for use on Jackson Ranch.

⁷ A portion of IRWD's 2023 SWP Deliveries from DRWD include 723 AF of Article 21, after losses, which was delivered to the Kern Water Bank.

Exhibit "D"

TABLE 4

Status of IRWD Purchase and Exchange Programs (AFTER LOSSES)

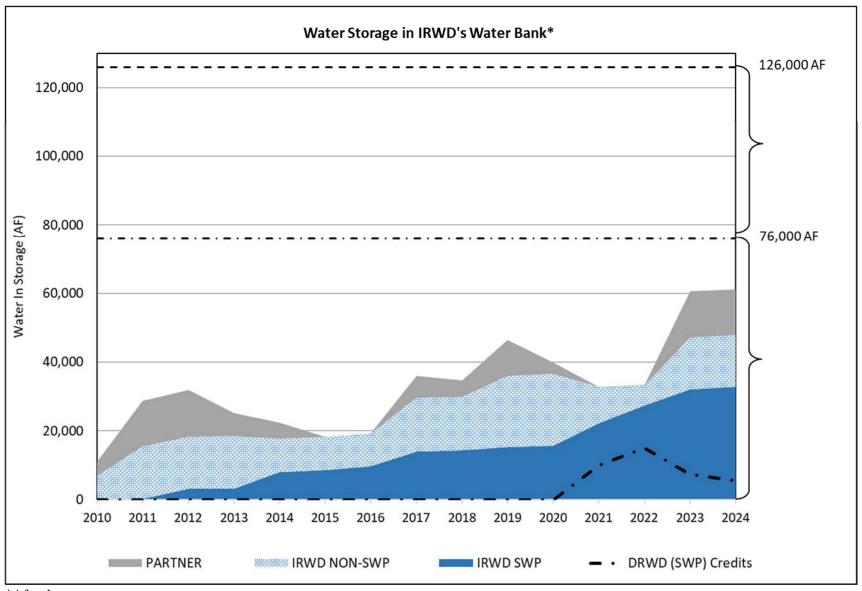
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					PARTNEI	RWATER					IF	RWD WATE	R			
	EXCHANGE	YEAR	AGREEMENT		DARTNER	DARTNER	IRWD		II	RWD BALANC	E			EXPORTABIL	.ITY	
PARTNER	RATIO	EXECUTED	TYPE	WATER TYPE	PARTNER SHARE (AF)	PARTNER BALANCE (AF)	SHARE (AF)	IN MWD SYSTEM (AF)	STORED IN Strand and Stockdale	KERN (AF) Kern Fan (W.Enos)	OWED BY DUDLEY RIDGE WD	TOTAL (AF)	EXPORTABLE TO IRWD (AF)	NON- EXPORTABLE (AF)	FOR USE ON JACKSON RANCH (DRWD)	SELLABLE (Y/N)
Semitropic Water Storage District	NA	2008	Purchase	SWP Article 21	NA	NA	2,842		2,403			2,403		2,403		Yes
Carpinteria Valley Water District	2-for-1	2008	Short-Term	SWP Table A	277		250		250			250		250		Yes
21	2-for-1	2010	Pilot	Kern River	4,108		3,903									Van
Buena Vista Water Storage District ¹	2-for-1	2011	Long-Term	Kern River	29,336	8,088	27,869		10,772			10,772		10,772		Yes
Antelope Valley East Kern Water Agency	2-for-1	2011	Pilot	SWP Table A	2,229		2,337	2,337				2,337	2,337			No
Carpinteria Valley Water District	2-for-1	2011	Pilot	SWP Table A	624		655	655				655	655			No
	2-for-1	for-1 2013 SWP/		SWP Table A	1,876		1,876	1,876				1,876	1,876			Yes
Dudley Ridge Water District (SWPAO #13012)			SWPAO	SWP Article 21	1,553		1,554	1,554				1,554	1,554			Yes
Metropolitan Water District ²	1-for-1	2014	Short-Term	SWP Table A	NA	NA	4,000	4,000				4,000	4,000			No
Dudley Ridge Water District (SWPAO #17030)	2-for-1	2018	SWPAO	SWP Table A	2,102	1,091	2,185	1,055	1,129			2,185	2,185		1,091	Yes
Central Coast Water Authority (SWPAO #17001)	2-for-1	2017	Short-Term	SWP Table A	258		258	258				258	258			No
3,	4.5-4	2047	Laura Tanan	SWP Table A	NA	NA	9,580		9,580			9,580	45.000			No
Dudley Ridge Water District ³ (SWPAO #19001)	1-for-1	2017	Long-Term	Credit	NA	NA	5,420				5,420	5,420	15,000			No
Central Coast Water Authority (SWPAO #19031)	2-for-1	2019	Short-Term	SWP Table A	298		323	298	25			323	323			No
Buena Vista Water Storage District ¹	2-for-1	2023	Short-Term	Kern River	2,025	2,025	1,923		1,183	741		1,923		1,923		Yes
Central Coast Water Authority (SWPAO #23012)	2-for-1	2023	Short-Term	SWP Table A	193	193	193			193		193	193			No
Antelope Valley East Kern Water Agency	2-for-1	2018	Long-Term	SWP Table A	3,032	3,032	3,032		2,461	571		3,032	3,032			No
Santa Clara Valley Water District	2-for-1	2024	Long-Term	SWP Table A												No
				Total:	47,910	14,428	68,199	12,033	27,803	1,504	5,420	46,760	31,412	15,348	1,091	NA

¹ Water acquired through BVWSD will be exportable after it is exchanged for SWP Table A through 1-for-1 exchange with Dudley Ridge Water District.
² Source of water was Buena Vista Water Storage District Kern River high flow water.

³ To account for the SWP water that will be returned to IRWD, the amount of water owed is shown as a credit. The total net of losses is 15,000 AF.

Exhibit "E"



^{*}After losses

Exhibit "F"

TABLE 5

IRWD Dedicated Water Banking Capacities for Existing and Proposed Exchange Programs December 11, 2024

STORAGE CAPACITY

Program	Dedicated Storage Capacity Strand Ranch (AF)	Dedicated Storage Capacity Stockdale West (AF)	Dedicated Storage Capacity Leased Storage Account (AF)	Kern Water Bank Storage Capacity (AF)
Total Capacity	50,000	26,000	50,000	9,495
BVWSD	40,000	-	-	-
IRWD/DRWD	10,000	6,000	-	-
AVEK	-	20,000	-	-
Valley Water	-	-	20,000	-
Proposed Programs:				
Homer LLC	-	1	8,000	-
Total Dedicated	50,000	26,000	28,000	-
Total Remaining	-	-	22,000	9,495

FIRST-PRIORITY RECHARGE CAPACITY

Program	Dedicated Recharge Capacity Strand Ranch (AF)	Dedicated Recharge Capacity Stockdale West (AF)	Dedicated Recharge Capacity Leased Storage Account (AF)	Kern Water Bank Recharge Capacity (AF)
Total Capacity	17,500	27,100	-	3,200
BVWSD	17,500	1	1	-
IRWD/DRWD	-	7,100	-	-
AVEK	-	20,000	-	-
Total Dedicated	17,500	27,100	-	-
Total Remaining	-	-	-	3,200

FIRST-PRIORITY RECOVERY CAPACITY

Program Partner	Dedicated Recovery Capacity Strand Ranch (AF)	Dedicated Recovery Capacity Stockdale West (AF)	Dedicated Recovery Capacity Leased Storage Account (AF)	Kern Water Bank Recovery Capacity (AF)
Total Capacity	17,500	11,250	-	1,520
BVWSD	6,667	-	-	-
DRWD	-	•	1	-
AVEK	-	3,333	-	-
IRWD	10,833	7,917	-	1,520
Total Dedicated	17,500	11,250	-	1,520
				_
Total Remaining	-	-	•	-

TABLE 6

Second-Priority Recharge and Recovery Capacity Available after Annual Scheduling of Dedicated First-Priority Recharge and Recovery Allocated to Existing Programs

November 21, 2024

SECOND-PRIORITY RECHARGE CAPACITY

Program	Dedicated Recharge Capacity Strand Ranch and Stockdale West (AF)	Minimum Program Share for Second-Priority 1	Available Minimum Recharge Capacity if not used by Existing Programs (AF)	Total Program Recharge Capacity (AF)
Total Capacity	44,600		44,600	
First Priority Programs Valley Water	44,600	40%	17,840	44,600 20,000
Proposed Programs:				
Homer LLC	-	16%	7,136	8,000
Total Dedicated	44,600	56%	24,976	
Total Remaining			19,624	

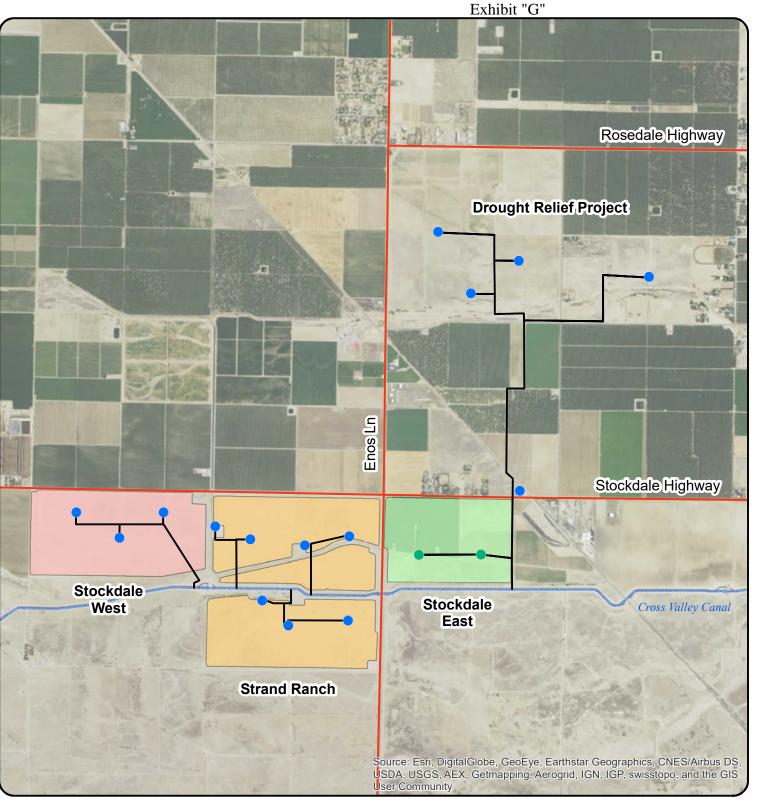
SECOND-PRIORITY RECOVERY CAPACITY

Program Partner	Dedicated Recovery Capacity Strand Ranch and Stockdale West (AF)	Minimum Program Share for Second Priority ¹	Minimum Available Recovery Capacity if not used by Existing Programs (AF)	Total Program Recovery Capacity (AF)
Total Capacity	28,750		28,750	
First Priority Programs	28,750		-	2,750
Valley Water	•	40%	3,333	3,333
Proposed Programs:				
Homer LLC	-	16%	1,333	1,333
Total Dedicated	28,750	56%	4,666	
Total Remaining	•		24,084	

¹ Second-priority recharge and recovery capacity allocated to programs on a pro-rata share based on share of leased storage capacity.

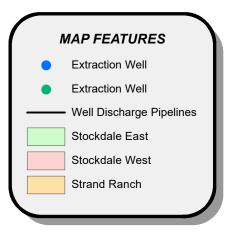
For example:

Valley Water Share: 20,000 AF of 50,000 AF leased storage (40%) Homer LLC Share: 8,000 AF of 50,000 AF leased storage (16%)





Location Map: IRWD Water Banking Projects Wells and Turnin Pipelines



This figure shows the location of IRWD's water banking project sites and extraction wells.

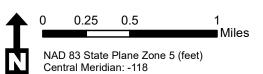
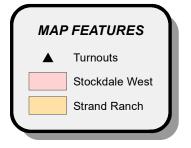


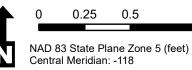
Exhibit "H" Rosedale Highway Enos Ln **Existing Siphon 50 CFS Capacity** From Strand Stockdale Highway Cross Valley Canal **Stockdale West Existing North & South** Turnout Strand Ranch 100 CFS Capacity **Turnout Facilities** 100 CFS Capacity Each Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping Aerogrid, IGN, IGP, swisstopo, and the GIS **User Community**



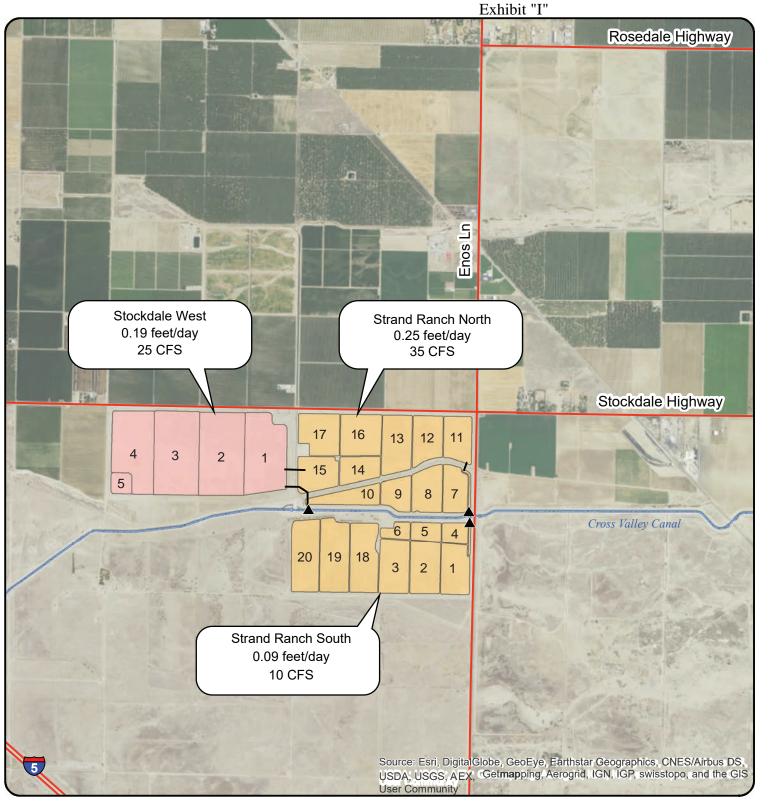
Location Map: IRWD Water Banking Projects Recharge Basins &Turnout Facilities



This figure shows the location of recharge basins, pipelines and turnout facilities.

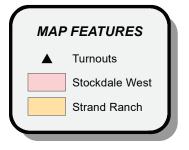


Miles

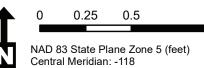




Location Map: IRWD Water Banking Projects Recharge Rates

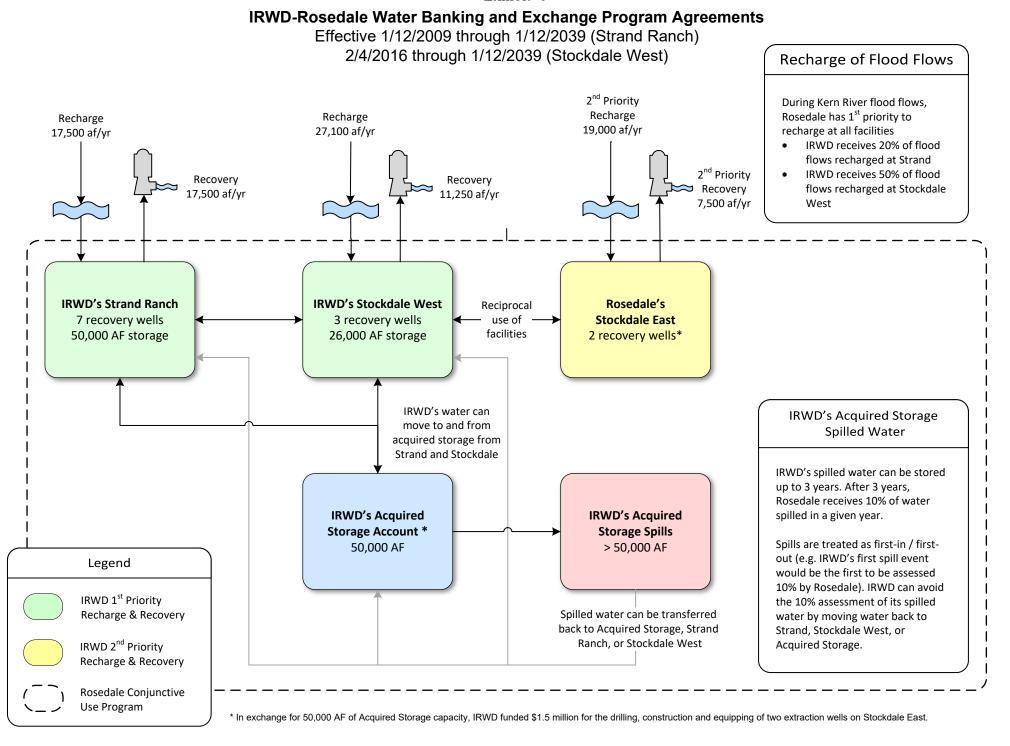


This figure shows the location of recharge basins and their associated recharge rates as of January 4, 2024



Miles

Exhibit "J"

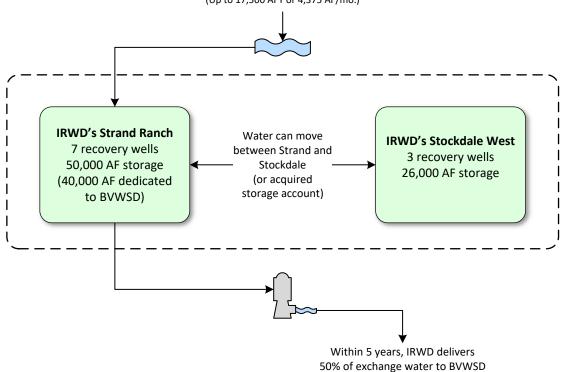


Buena Vista Water Storage District Long Term Water Exchange Program

Effective 1/1/2011 through 1/12/2039

BVWSD delivers non-SWP water to Strand Ranch (IRWD receives 50%)

(Up to 17,500 AFY or 4,375 AF/mo.)





IRWD 1st Priority Recharge & Recovery

> Rosedale Conjunctive Use Program &

Coordinated Operation

[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. IRWD pays for recovery of water returned to BV. Water to be remitted back to BV may remain in storage at Strand Ranch beyond the 4th year, in exchange for a greater percent being transferred to IRWD as compensation per the table shown to the right:

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	60%	40%
6	70%	30%
7	80%	20%
8	90%	10%
9	100%	0%

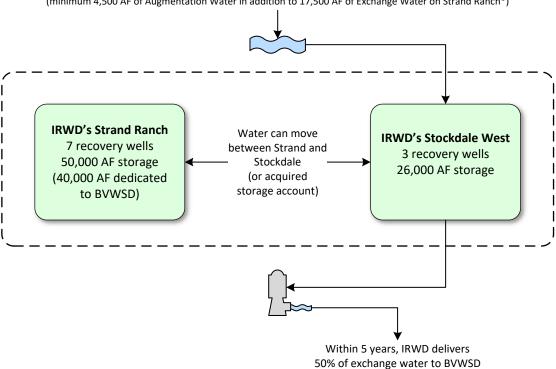
(no more than 6,667 AFY or 1,667 AF/mo.)

Buena Vista Water Storage District One-Year Program to Augment Recharge Using Stockdale West Recharge Facilities

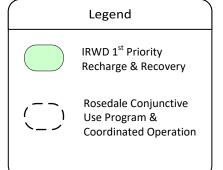
Effective 6/28/2023 through 12/31/2023

BVWSD delivers non-SWP water to Stockdale West (IRWD receives 50%)

(minimum 4,500 AF of Augmentation Water in addition to 17,500 AF of Exchange Water on Strand Ranch*)



(additional 750 AFY recovery)



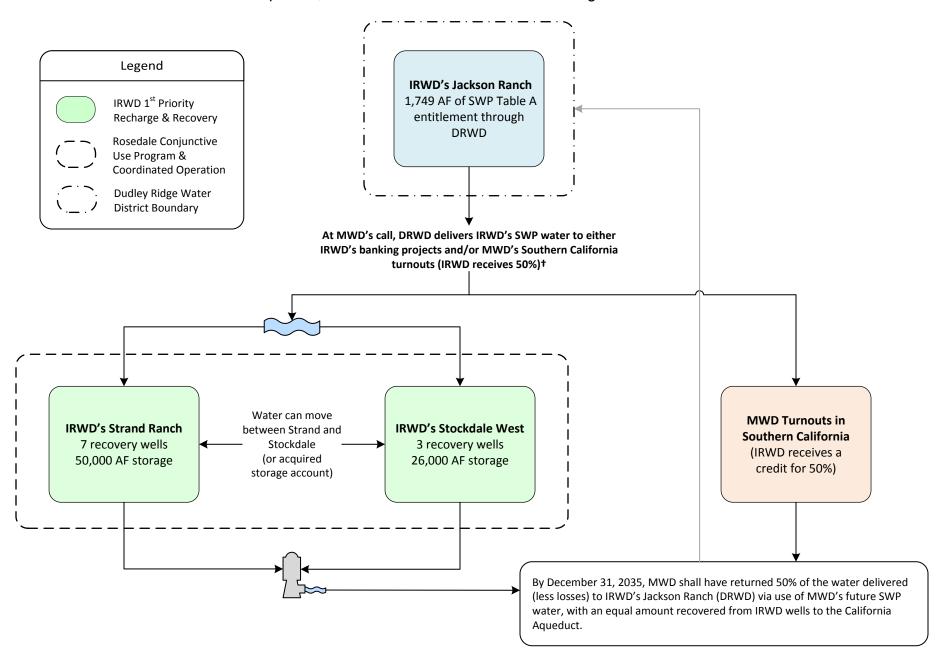
* IRWD agrees to pay BV \$25 per AF for IRWD's share of the Augmentation Water and Exchange Water

[†]IRWD shall remit one-half of the exchanged supply less one-half of reasonable losses back to BV no later than December 31st of the 4th year following the associated recharge event. BV pays for recovery of its share of Augmentation Water. Water to be remitted back to BV may remain in storage at Strand Ranch beyond the 4th year, in exchange for a greater percent being transferred to IRWD as compensation per the table shown to the right:

Year Following Recharge Event	Percent Transferred to IRWD	Percent Returned to BV During or Before Indicated Year
1	50%	50%
2	50%	50%
3	50%	50%
4	50%	50%
5	60%	40%
6	70%	30%
7	80%	20%
8	90%	10%
9	100%	0%

Exhibit "L"

Dudley Ridge Water District (DRWD) Unbalanced Exchange Program Up to 12,240 AF delivered from 6/7/2018 through 12/31/2027



[†]Consistent with IRWD-MWD coordinated operating agreement.

Coordinated Operating, Water Storage, Exchange and Delivery Agreement Between MWD, MWDOC and IRWD Effective 5/1/2011 through 11/4/2035

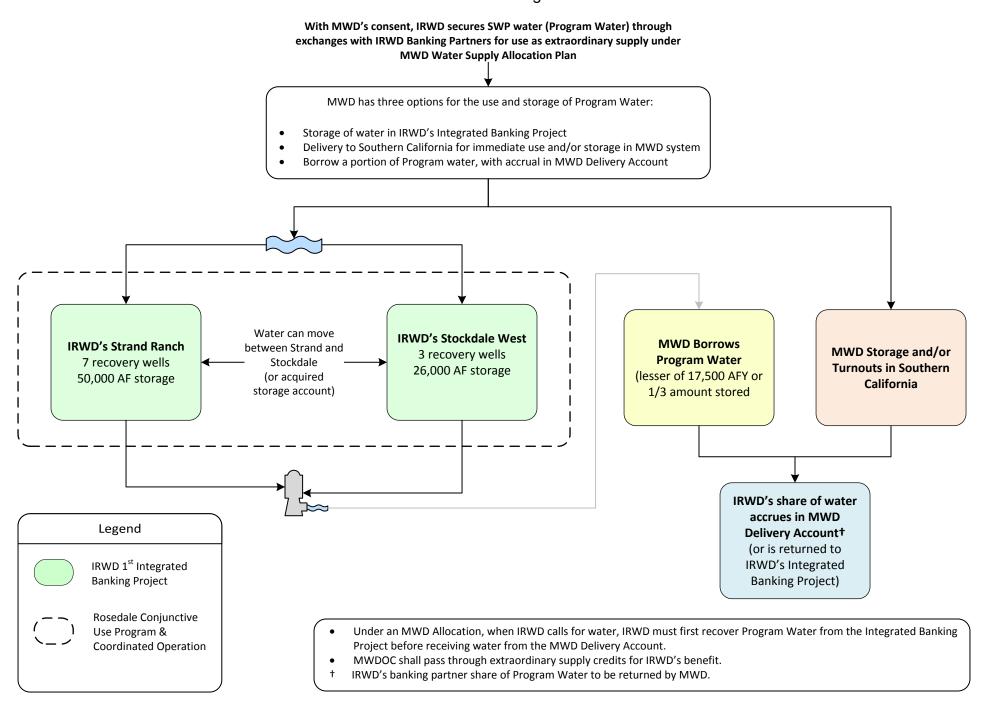
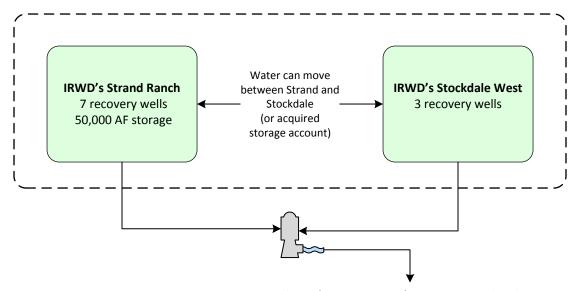


Exhibit "N"

Agreement for Conveyance of Water Between MWD, MWDOC, and IRWD (Wheeling Agreement) Template for future agreements



IRWD recovers its share of non-SWP water from its Integrated Banking Projects for use as extraordinary supply under a declared MWD Water Supply Allocation. MWD will coordinate the conveyance and delivery of recovered water to be used within IRWD's Service Area.

Delivery can also occur through an operational exchange.*

Legend IRWD 1st Priority Recharge & Recovery Rosedale Conjunctive Use Program & Coordinated Operation

*The recovered water must be used within IRWD's service area. IRWD to pay MWD wheeling charges, including system access rate, water stewardship rate, and treatment surcharge (if applicable), for each acre foot of recovered water wheeled by MWD. IRWD will pay the actual costs of power incurred by MWD to convey recovered water in the California Aqueduct to IRWD delivery points.

Dudley Ridge Water District Long Term 1-for-1 Water Exchange Program

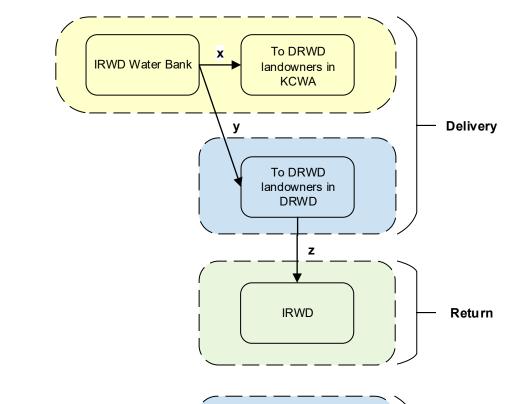
Effective 5/31/2017 through 11/4/2035



(Per Sections 2, 3, 4.1.1, and 4.1.3)

- x= Non-Project Water required to stay in Kern County
- y= Non-Project Water allowed to leave Kern County
- z= DRWD Table A Water equal to x+y less applicable losses, if any

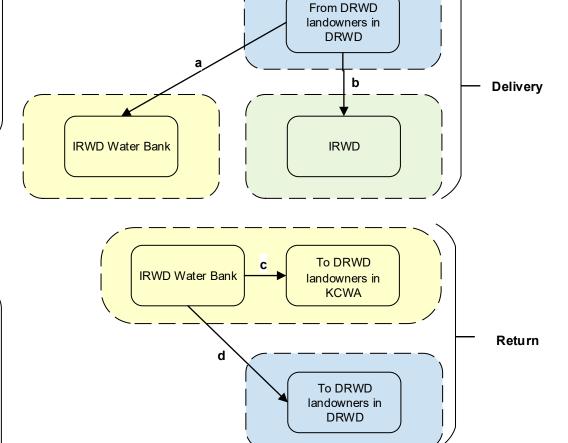
Per Section 4.1.3, z can be delivered to IRWD via in-ground transfer to IRWD, SWP delivery to IRWD banking facilitites, or SWP delivery to MWDSC



Scenario B

(Per Sections 2, 3, and 4.1.2)

a + b = c + d (less applicable losses, if any)



Legend



KCWA Service Area



DRWD Service Area



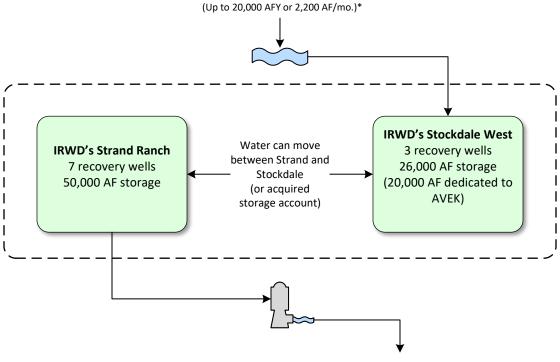
IRWD Service Area

†The cost of water exchanged between IRWD and DRWD will be equalized

Exhibit "P" Antelope Valley-East Kern Water Agency (AVEK) Long Term Water Exchange Program

Effective 12/21/2018 through 12/31/2035

AVEK delivers SWP water to IRWD Water Bank (IRWD receives 50%)



Within 7 years, IRWD delivers 50% of exchange water to AVEK (No more than 1/3 of AVEK's share of capacity and not to exceed 3,333 AF in a given year.)

Legend



IRWD 1st Priority Recharge & Recovery



Rosedale Conjunctive Use Program & Coordinated Operation

*Up to 20,000 AF per year of AVEK Exchange Water may be delivered to IRWD for recharge using recharge facilities at the Strand Ranch and Stockdale West for storage in the Stockdale West Bank. IRWD shall remit one-half of stored supplies less one half of losses back to AVEK no later than December 31st of the 7th year, following the associated recharge event.

Exhibit "Q" Santa Clara Valley Water District (Valley Water) Long Term Water Exchange Program Effective 9/4/2024 through 12/31/2035

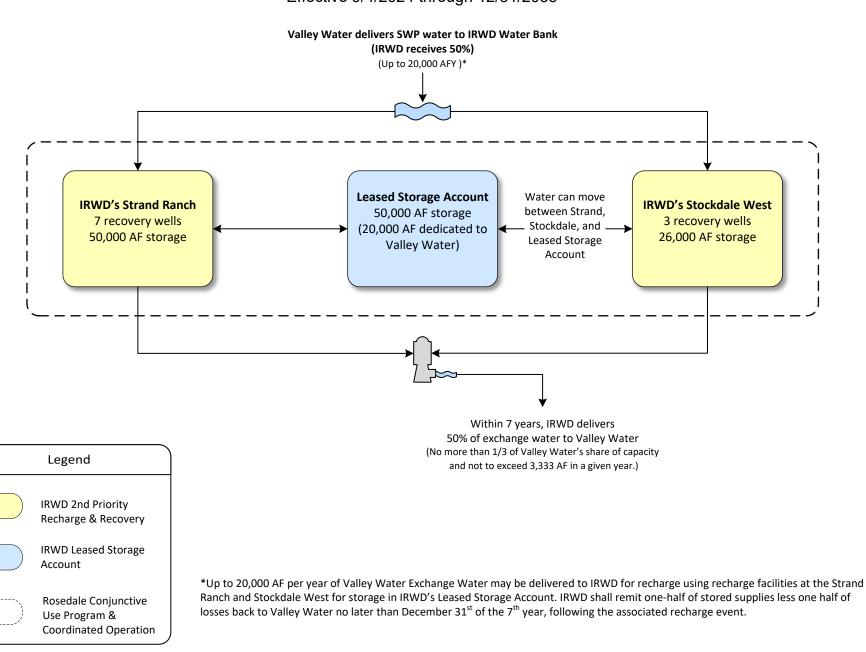


Exhibit "R"

TABLE 6
IRWD Water Banking Program Costs of Water Summary

January 16, 2025

Program Partner	Agreement	Water Type	IRWD Exportable Amount (AF) ¹	Credit in MWD System (AF)	IRWD Previously Recovered or Exchanged (AF)	IRWD Exportable Water Stored in Kern County (AF)	Variable Recharge Costs ² (\$/AF)	Fixed Costs ³ (\$/AF)	Capital Component ⁴ (\$/AF)	Cost of Water (\$/AF)
Carpinteria	2008 Short Term	Table A	250	-	-	250	\$ 11.58	\$21	\$190	\$223
	2011 Short Term	Table A	655	655	-	-	\$ 8.31	\$21	\$190	\$219
Buena Vista ⁵	2010 Short Term	Kern River	3,903	ı	3,903	-	\$ 13.56	\$21	\$190	\$225
	2011 Long Term	Kern River	27,869	ı	17,097	10,772	\$ 19.11	\$21	\$190	\$230
AVEK	2011 Short Term	Table A	2,337	2,337	-	-	\$ 9.46	\$21	\$190	\$220
	2023 Short Term	Table A	3,032	-	-	3,032	Pending	\$21	\$190	Pending
Metropolitan	2014 Short Term	Table A	4,000	4,000	-	-	\$ 16.47	\$21	\$190	\$211
Central Coast	2017 Short Term	Table A	258	258	-	-	\$ 38.46	\$21	\$190	\$249
	2019 Short Term	Table A	323	298	-	25	\$ 28.16	\$21	\$190	\$239
	2023 Short Term	Table A	193	-	-	193	Pending	\$21	\$190	Pending
DRWD ⁶	2013 Long Term	Table A, Article 21	3,430	3,430	-	0	¢ 410 E4	ć21	\$190	\$630
	2018 Long Term	Table A	1,885	1,055	-	830	\$ 418.54	\$21		
	48,134	12,033	21,000	15,101						

¹ Water banking data from 2010 to 2023. Buena Vista water and Carpinteria 2008 water is not exportable but can be exchanged for an exportable water supply.

² Recharge costs include CVC pumping, CVC power standby, CVC capacity charge, CVC expansion charge, Rosedale administrative charge, and third-party wheeling charge (as applicable).

³ Fixed costs are based on a 5-year average of fixed costs billed per AF. Fixed costs include Rosedale fixed costs as well as annual operations and maintenance.

⁴ Capital component does not include land costs. Capital component includes staff time, capital projects for water banking, and replacement cost of water banking, less grants received for Strand and Stockdale and the DRWD sale in 2021. These grant and sale items are equivalent to approximately \$20/AF.

⁵ Based on IRWD billing to partners for share of water recovered to date. IRWD pays for Buena Vista water recovery. The average recovery cost across programs is \$87.56 per AF.

⁶ Does not include DRWD 1-for-1 agreement.

Exhibit "R" **TABLE 7**

Water Banking Estimated Cost of Water to IRWD Service Area

January 16, 2025

Program Partner	Agreement	Water Type	IRWD Exportable Water Stored in Kern County ¹ (AF)	Cost of Water ¹ (\$/AF)	Estimated Recovery of Water ² (\$/AF)	2025 MWD Tier 1 Untreated Rate and SAC Surcharge ³ (\$/AF)	Total Cost of Water to IRWD Service Area (\$/AF)
Carpinteria	2008 Short Term	Table A	250	\$223	\$130	\$ 913	\$1,266
	2011 Short Term	Table A	-	\$219	\$130	\$ 913	\$1,262
Buena Vista	2010 Short Term	Kern River	-	\$225	\$130	\$ 913	\$1,268
	2011 Long Term	Kern River	10,772	\$230	\$130	\$ 913	\$1,273
AVEK	2011 Short Term	Table A	-	\$220	\$130	\$ 913	\$1,263
	2023 Short Term	Table A	3,032	Pending	\$130	\$ 913	Pending
Metropolitan	2014 Short Term	Table A	-	\$211	\$130	\$ 913	\$1,254
Central Coast	2017 Short Term	Table A	-	\$249	\$130	\$ 913	\$1,292
	2019 Short Term	Table A	25	\$239	\$130	\$ 913	\$1,282
	2023 Short Term	Table A	193	Pending	\$130	\$ 913	Pending
DRWD	2013 Long Term	Table A, Article 21	0	\$630	\$130	\$ 913	\$1,673
	2018 Long Term	Table A	830				
		Total	15,101				

¹ From Table 6.

² Recovery costs include estimated PG&E power for pumping, CVC charges, Recovery O&M, and Rosedale administrative charges to deliver to MWD service area.

³ Assumes IRWD would take delivery as extraordinary supply through Irvine Lake to the Baker Water Treatment Plant. The SAC surcharge rate is estimated at \$1/AF.

Summary of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan Water District and Municipal Water District of Orange County (MWDOC) (February 8, 2024)

Agreement approved (unanimously) by the IRWD Board on November 22, 2010; Agreement Term: April 21, 2011 to November 4, 2035

Summary of Benefits to IRWD:

- 1. IRWD benefits from all State Water Project (SWP) water IRWD secures; Metropolitan's borrowing of this water is temporary.
- 2. On behalf of IRWD, Metropolitan uses its SWP exchange and conveyance capacities to move IRWD's water for banking.
- 3. IRWD can "store" water in Metropolitan's system as a credit, freeing up space in IRWD's Water Bank with the water stored closer to the IRWD service area.
- 4. IRWD does not incur conveyance or evaporation losses on its water that is conveyed in Metropolitan's system and stored in Metropolitan's reservoirs.
- 5. IRWD avoids groundwater recovery (pumping) costs when Metropolitan issues a credit for IRWD's SWP supplies in Southern California (currently \$122/AF¹).
- 6. IRWD pays Metropolitan's melded system power rate currently \$182/AF, not DWR's current power costs of \$330/AF² (\$148/AF savings).
- 7. Deliveries are on-demand to IRWD at its service connections in Orange County, which are not subject to lower priorities for wheeling.
- 8. Metropolitan pays all SWP costs, including variable OMP&R supply costs, associated with SWP water secured by IRWD³.
- IRWD pays Metropolitan's Full-Service Tier-1 Untreated Rate, which is currently \$903/AF, for deliveries at its service connections allowing IRWD to avoid higher Metropolitan wheeling charges.
- 10. IRWD only pays once for supply at the current Tier-1 Supply Rate of \$332/AF.
- 11. Deliveries to IRWD's service area qualify as Extraordinary Supply during a Water Supply Allocation, allowing IRWD to avoid Metropolitan's Allocation Surcharge of between \$1,480/AF and \$2,960/AF.
- 12. IRWD increases local water supply reliability for its ratepayers.

¹ Estimated from IRWD's current groundwater pumping costs and Water Bank related operations costs. Metropolitan has the option to extinguish credits by returning water to the IRWD Water Bank. In recent borrowing letter agreement, Metropolitan agreed to waive its ability to return borrowed water to the Water Bank.

Melded system and actual power costs were taken from Metropolitan's Fiscal Years 2022-23 and 2023-24 Biennial Budget Report and 2022 Cost of Service Study.

Does not include fixed costs paid by IRWD's unbalanced exchange partners. In 2014 and 2017, Metropolitan's SWP costs were \$1,097/AF and \$359/AF, respectively.

Summary of IRWD's Coordinated Operating, Water Storage, Exchange and Delivery Agreement with Metropolitan and MWDOC February 8, 2024 Page 2 of 2

Summary of Benefits to MWD:

- Metropolitan maintains control of all SWP supplies entering its service area as required by its SWP Contract with California Department of Water Resources (DWR).
- 2. Metropolitan's investments in the SWP are protected by not causing a reduction in revenue received by Metropolitan for payment of SWP fixed charge obligations.
- 3. Metropolitan can temporarily borrow SWP water secured by IRWD.
- 4. Metropolitan is assured that IRWD is not competing for water supplies.
- 5. Increased regional water supply reliability.

Exhibit "T"

TABLE 8
IRWD 2025 Recharge Operations- BEFORE LOSSES

January 16, 2025

Actual and Forecasted Amounts:

										Expected
	IRWD		_	Central		Valley			Expected	Recharge
	Table A	DRWD 1:1	MWD^1	Coast	Homer	Water	Total		Recharge ²	Rate
Month	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	(AF)	Status	(AF)	(CFS)
January	-	2,000	-	-	-	-	2,000		2,000	130
February	-	-	-	1,000		2,000	3,000		3,000	120
March	-	-	-	-	1,854	-	1,854		1,854	100
April	-	-	-	-	-	-	-		-	80
May	-	-	-	-	-	-	-		-	80
June	-	-	-	-	-	-	-		-	80
July	-	-	-	-	-	-	-		-	80
August	-	-	-	-	-	-	-		-	80
September	-	-	-	-	-	-	-		-	80
October	-	-	-	-	-	-	-		-	80
November	262	-	79	-	-	-	341		341	80
December	-	-	-	-	-	-	-		-	80
Tot	al 262	2,000	79	1,000	1,854	2,000	7,195		7,195	
Recharge go	al: 262	5,291	79	1,000	1,854	2,000	10,486			

¹ In 2021 and 2022, MWD took direct delivery of IRWD's DRWD SWP Table A water. MWD will return 50% of the water to the IRWD Water Bank this year and the remaining 50% will be delivered to Jackson Ranch.

²The expected recharge is based on the expected recharge rate and remaining recharge capacity.